CONTENTS OF VOLUME 34

Adams, G. A. See Falconer, E. L., 338.

Alexander, W. A. See Cambron, A., 665.

Allen, C. F. H., Davis, T. J., Stewart, D. W., and **VanAllan, J. A.** α-Aryl-β-aroylpropionic acids and their condensation products with aromatic aldehydes, 926.

Anet, F. A. L. and **Bavin, P. M. G.** Studies in the Wagner–Meerwein rearrangement. Part I, 991.

The OH stretching frequencies of some new alcohols, 1756.

Armstrong, D. A. and **Winkler, C. A.** The reaction of active nitrogen with mercury diethyl, 885.

Arnell, J. C. See McDermot, H. L., 1114.

Atkinson, J. G. See Elofson, R. M., 4.

Ausloos, P. The gas phase photolysis of acetic and propionic anhydride, 1709.

Ayscough, P. B. and **Steacie, E. W. R.** The reactions of trifluoromethyl radicals with propane, *n*-butane, and isobutane, 103.

Bader, H. and **Edmiston, W. A.** Synthesis of 1,1-di-(*p*-carboxyphenyl)ethane and its esters, 383.

Baer, E., Maurukas, J., and **Clarke, D. D.** L-Serylglycylglycine, 1182.

Baer, E. and **Stancer, H. C.** Phosphorylethanolamine, 436.

Baerg, A. P. See Bartholomew, R. M., 201.

Bannard, R. A. B. and **Leitch, L. C.** The synthesis of two isomeric thymols, 1464.

Barclay, L. R. C. and **MacLean, D. B.** *Lycopodium* alkaloids. IV. Reactions of α-cyanobromolycopodine and its derivatives, 1519.

Barnes, W. H. See Gupta, M. P., 563.

Bartholomew, R. M. and **Baerg, A. P.** The yield of Cs^{138} in thermal neutron fission of U^{235}, 201.

Bavin, P. M. G. See Anet, F. A. L., 991, 1756.

Beals, R. E. and **Brown, W. H.** Diphenylcyanamide derivatives. III. 2-Thiopseudoureas, 1408.

Benson, G. C. See van Zeggeren, F., 1501.

Benson, G. C., Schreiber, H. P., and **van Zeggeren, F.** An experimental determination of the surface enthalpy of sodium chloride, 1553.

Berlinguet, L. See Gaudry, R., 502; Talbot, G., 911, 1440.

Bernstein, H. J. Application of the vibrational sum rule to halogenated ethylenes, 617.

See also Evans, J. C., 1037, 1083, 1127, 1139; Ito, K., 170.

Betts, R. H., Harris, W. E., and **Stevenson, M. D.** The partial separation of Na^{22} from Na^{24} by ion exchange chromatography, 65.

Bharucha, K. R., Buckley, G. C., Cross, C. K., Rubin, L. J., and **Ziegler, P.** The conversion of hyodesoxycholic acid to progesterone, 982.

Bidinosti, D. R. and **Biermann, W. J.** A redetermination of the relative enthalpies of aqueous perchloric acid solutions from 1 to 24 molal, 1591.

Biermann, W. J. See Bidinosti, D. R., 1591.

Bishop, C. T. Structure of a synthetic polyxylose, 1255.

See also Lemieux, R. U., 1365.

Bishop, C. T. and **Schmorak, J.** Synthesis of 2,5,6-tri-*O*-methyl-D-glucose, 845.

Blades, A. T., Fleming, W. H., and **Thode, H. G.** The ratio of xenon to krypton in U^{235} fission, 233.

Boivin, J. L. Preparation of guanidine from urea, sulphur dioxide, and ammonia under pressure, 827.

See also Gagnon, P. E., 530, 1662.

Bourns, A. N. See Stasiuk, F., 123.

Brice, C. See Lemieux, R. U., 1006; Perlin, A. S., 85, 541.

Briggs, T. I., Dutton, G. G. S., and **Merler, E.** The Fries rearrangement of phenyl isobutyrate, 851.

Brown, G. M. See Pattison, F. L. M., 879.

Brown, R. M. See Grummitt, W. E., 206.

CONTENTS OF VOLUME 34

Adams, G. A. See Falconer, E. L., 338.

Alexander, W. A. See Cambron, A., 665.

Allen, C. F. H., Davis, T. J., Stewart, D. W., and **VanAllan, J. A.** α-Aryl-β-aroylpropionic acids and their condensation products with aromatic aldehydes, 926.

Anet, F. A. L. and **Bavin, P. M. G.** Studies in the Wagner–Meerwein rearrangement. Part I, 991.

The OH stretching frequencies of some new alcohols, 1756.

Armstrong, D. A. and **Winkler, C. A.** The reaction of active nitrogen with mercury diethyl, 885.

Arnell, J. C. See McDermot, H. L., 1114.

Atkinson, J. G. See Elofson, R. M., 4.

Ausloos, P. The gas phase photolysis of acetic and propionic anhydride, 1709.

Ayscough, P. B. and **Steacie, E. W. R.** The reactions of trifluoromethyl radicals with propane, *n*-butane, and isobutane, 103.

Bader, H. and **Edmiston, W. A.** Synthesis of 1,1-di-(*p*-carboxyphenyl)ethane and its esters, 383.

Baer, E., Maurukas, J., and **Clarke, D. D.** L-Serylglycylglycine, 1182.

Baer, E. and **Stancer, H. C.** Phosphorylethanolamine, 436.

Baerg, A. P. See Bartholomew, R. M., 201.

Bannard, R. A. B. and **Leitch, L. C.** The synthesis of two isomeric thymols, 1464.

Barclay, L. R. C. and **MacLean, D. B.** *Lycopodium* alkaloids. IV. Reactions of α-cyanobromolycopodine and its derivatives, 1519.

Barnes, W. H. See Gupta, M. P., 563.

Bartholomew, R. M. and **Baerg, A. P.** The yield of Cs^{138} in thermal neutron fission of U^{235}, 201.

Bavin, P. M. G. See Anet, F. A. L., 991, 1756.

Beals, R. E. and **Brown, W. H.** Diphenylcyanamide derivatives. III. 2-Thiopseudoureas, 1408.

Benson, G. C. See van Zeggeren, F., 1501.

Benson, G. C., Schreiber, H. P., and **van Zeggeren, F.** An experimental determination of the surface enthalpy of sodium chloride, 1553.

Berlinguet, L. See Gaudry, R., 502; Talbot, G., 911, 1440.

Bernstein, H. J. Application of the vibrational sum rule to halogenated ethylenes, 617.

See also Evans, J. C., 1037, 1083, 1127, 1139; Ito, K., 170.

Betts, R. H., Harris, W. E., and **Stevenson, M. D.** The partial separation of Na^{22} from Na^{24} by ion exchange chromatography, 65.

Bharucha, K. R., Buckley, G. C., Cross, C. K., Rubin, L. J., and **Ziegler, P.** The conversion of hyodesoxycholic acid to progesterone, 982.

Bidinosti, D. R. and **Biermann, W. J.** A redetermination of the relative enthalpies of aqueous perchloric acid solutions from 1 to 24 molal, 1591.

Biermann, W. J. See Bidinosti, D. R., 1591.

Bishop, C. T. Structure of a synthetic polyxylose, 1255.

See also Lemieux, R. U., 1365.

Bishop, C. T. and **Schmorak, J.** Synthesis of 2,5,6-tri-*O*-methyl-D-glucose, 845.

Blades, A. T., Fleming, W. H., and **Thode, H. G.** The ratio of xenon to krypton in U^{235} fission, 233.

Boivin, J. L. Preparation of guanidine from urea, sulphur dioxide, and ammonia under pressure, 827.

See also Gagnon, P. E., 530, 1662.

Bourns, A. N. See Stasiuk, F., 123.

Brice, C. See Lemieux, R. U., 1006; Perlin, A. S., 85, 541.

Briggs, T. I., Dutton, G. G. S., and **Merler, E.** The Fries rearrangement of phenyl isobutyrate, 851.

Brown, G. M. See Pattison, F. L. M., 879.

Brown, R. M. See Grummitt, W. E., 206.

Brown, R. M. and **Grummitt, W. E.** The determination of tritium in natural waters, 220.

Brown, W. H. See Beals, R. E., 1408.

Brown, W. H. and **Sawatsky, H.** The condensation of furan and sylvan with some carbonyl compounds, 1147.

Brunauer, S., Kantro, D. L., and **Weise, C. H.** The surface energies of calcium oxide and calcium hydroxide, 729.

The surface energies of amorphous silica and hydrous amorphous silica, 1483.

Bryce, W. A. and **Kebarle, P.** Deuterium migration during the ionization of 1-butene-4-d_2 by electron impact, 1249.

Buckley, G. C. See Bharucha, K. R., 982.

Burton, M. See Chanmugam, J., 1021.

Butler, G. C. See Walker, I. G., 1168.

Butler, J. P., Lounsbury, M., and **Merritt, J. S.** The preparation and properties of Pu^{242}, 253.

Cambron, A. See Smeltzer, W. W., 1046.

Cambron, A. and **Alexander, W. A.** Skeletal silver catalysts for the oxidation of ethylene to ethylene oxide, 665.

Campbell, A. N. and **Debus, G. H.** Conductances of lithium nitrate solutions in ethyl alcohol and ethyl alcohol – water mixtures at 25.0° C., 1232.

Campbell, A. N., Fishman, J. B., Rutherford, G., Schaefer, T. P., and **Ross, L.** Vapor pressures of aqueous solutions of silver nitrate, of ammonium nitrate, and of lithium nitrate, 151.

Campbell, A. N. and **Griffiths, J. E.** The system lithium chlorate – lithium chloride – water at various temperatures, 1647.

Campbell, A. N. and **Kartzmark, E. M.** The system LiCl–NaCl–KCl–H_2O at 25° C., 672.

The system $LiNO_3$–C_2H_5OH–H_2O at 25° C., 1405.

Campbell, A. N. and **Kartzmark, R.** The systems aluminum–tin and aluminum–lead–tin, 1428.

Campbell, A. N. and **Ross, L.** Application of the Wishaw–Stokes equation to the conductances of potassium chloride solutions at 25° C., 566.

Canady, W. J. See Papee, H. M., 1677.

Carbonneau, L. J. and **Downing, D. C.** Preparation of tributyl antimonite, 184.

Catterall, E. See Cooper, W., 387.

Chanmugam, J. and **Burton, M.** Photolysis of ketene in the presence of hydrogen, 1021.

Charlesworth, E. H. and **Giesinger, A.** Reactions of some halogen derivatives of tetrahydropyran-2-ol, 376.

Charlson, A. J., Gorin, P. A. J., and **Perlin, A. S.** The configuration of glycosidic linkages in oligosaccharides. II. By degradation of reducing disaccharides to 2-*O*-glycosylglycerols, 1811.

Charlson, A. J. and **Perlin, A. S.** Further observations on the lead tetraacetate oxidation of reducing disaccharides, 1200.

The configuration of glycosidic linkages in oligosaccharides. I. Application of Jackson and Hudson's oxidation method to reducing disaccharides, 1804.

Charlwood, P. A. See Smith, D. B., 364.

Chisholm, M. J. and **Hopkins, C. Y.** Composition of delphinium seed oil, 459.

Cipera, J. D. T. See Lemieux, R. U., 906.

Clarke, D. D. See Baer, E., 1182.

Coffin, C. C. See Tingley, I. I., 14.

Colvin, J. R. See Reichmann, M. E., 160, 411.

Cook, D., Lupien, Y., and **Schneider, W. G.** Molecular interaction of hydrogen chloride with π-orbital donor molecules. I. Alkenes and alkynes, 957.

Molecular interaction of hydrogen chloride with π-orbital donor molecules. II. Benzene and methyl benzenes, 964.

Cook, W. H. See Martin, W. G., 809.

Cooper, W. and **Catterall, E.** Cross-linking of copolymers from methyl vinyl ketone and *n*-butyl acrylate, 387.

Cornish, F. W., Phillips, G., and **Thomas, A.** Ethylene diamine tetraacetic acid and citric acid as eluants in ion exchange separation of rare earths, 1471.

Couture, A. M. and **Laidler, K. J.** The partial molal volumes of ions in aqueous solution. I. Dependence on charge and radius, 1209.

Cowper, G. See Cruikshank, A. J., 214.

Craig, D. See Robinson, J. R., 1596.

Craig, D., Robinson, J. R., and **Fowler, R. B.** The reaction of tetramethylthiuramdisulphide with acetone. II. The effects of additives, 1601.

Crawford, L. W., Eaton, E. O., and **Pepper, J. M.** An improved synthesis of acetosyringone, 1562.

Cross, C. K. See Bharucha, K. R., 982.

Crowther, J. and **Westman, A. E. R.** The hydrolysis of the condensed phosphates. III. Sodium tetrametaphosphate and sodium tetraphosphate, 969.

Cruikshank, A. J. See Grummitt, W. E., 206.

Cruikshank, A. J., Cowper, G., and **Grummitt, W. E.** Production of Be^7 in the atmosphere, 214.

Cvetanović, R. J. The effect of atmosphere depletion in spherical diffusion flames, 54.
Reaction of oxygen atoms with acetaldehyde, 775.

Davidson, D. W. A dilatometric study of solid methanol-*d*, 1243.

Davis, T. J. See Allen, C. F. H., 926.

Debus, G. H. The calculation of the extent of ion-pair formation in solution, 1358.
See also Campbell, A. N., 1232.

DeLury, D. B. See Westman, A. E. R., 1134.

Denovan, A. S. See McKenzie, D. E., 1176.

Diaper, D. G. M. and **Richardson, F. R.** Alcoholic hexanitrato ammonium cerate as a quantitative oxidant for organic substances, 1835.

Downing, D. C. See Carbonneau, L. J., 184.

Duff, J. G. and **Pepper, J. M.** The synthesis of 3,4,5-trimethoxyphenylacetaldehyde, 842.

Dunell, B. A. See Grant, R. F., 1514.

Dunford, B., Evans, H. G. V., and **Winkler, C. A.** The reactions of active nitrogen with alkyl chlorides, 1074.

Dunn, G. E. and **Warkentin, J.** An isotopic study of the reducing action of the Grignard reagent, 75.

Dutton, G. G. S. The occurrence of 4-*O*-methyl-D-glucuronic acid in lemon gum, 406.
See also Briggs, T. I., 851.

Eaton, E. O. See Crawford, L. W., 1562.

Edmiston, W. A. See Bader, H., 383.

Edwards, O. E., Marion, L., and **Stewart, D. K. R.** The chemistry of lycoctonine, 1315.

Edwards, W. J. and **McCallum, K. J.** Chemical effects of the $C^{12}(\gamma, n)C^{11}$ reaction in carbonates, 189.

Elofson, R. M. and **Atkinson, J. G.** The polarography of the monoximes and dioximes of benzoquinone, naphthoquinone, and anthraquinone, 4.

Erskine, A. J. and **Jones, J. K. N.** Fractionation of polysaccharides, 821.

Evans, H. G. V. See Dunford, B., 1074; Whalley, B. J. P., 1154.

Evans, H. G. V., Freeman, G. R., and **Winkler, C. A.** The reactions of active nitrogen with organic molecules, 1271.

Evans, H. G. V. and **Winkler, C. A.** The reactive components in active nitrogen and the role of spin conservation in active nitrogen reactions, 1217.

Evans, J. C. and **Bernstein, H. J.** The vibrational spectra of isobutane and isobutane-d_1, 1037.
The vibrational spectra of acetaldehyde and acetaldehyde-d_1, 1083.
Intensity in the Raman effect. V. The effect of intermolecular interaction on the Raman spectrum of carbon disulphide, 1127.

Evans, J. C., Wilmshurst, J. K., and **Bernstein, H. J.** The infrared and Raman spectra of allene-1,1-a_2, 1139.

Fairbairn, D. and **Jones, R. N.** Cholesterol from *Ascaris lumbricoides* (Nematoda), 182.

Falconer, E. L. and **Adams, G. A.** The aldobiouronic acids of hemicellulose B of oat hulls, 338.

Falk, M. See Giguère, P. A., 1833.

Farmer, J. B. See Lossing, F. P., 701; McDowell, C. A., 345.

Favre, H., Marinier, B., and **Richer, J-C.** Dérivés du triméthyl-1,8,8 bicyclo[3,2,1]octane. I. La réaction du diazométhane avec la camphoquinone, 1329.

Fishman, J. B. See Campbell, A. N., 151.

Fleming, W. H. See Blades, A. T., 233.

Fleming, W. H. and **Thode, H. G.** The relative yields of the isotopes of xenon in plutonium fission, 193.
The mass assignment of the chain 2 min. Sb → 77.7 hr. Te → 2.25 hr. I, 408.

Flood, E. A. See Huber, M. E., 1288, 1497.

Forbes, W. F. and **Mueller, W. A.** Light absorption studies. Part III. Structure and light absorption of trisubstituted benzene derivatives, 1340.
Light absorption studies. Part IV. The effects of sterically hindered conformations on the electronic spectra (B-bands) of conjugated systems, 1347.
Light absorption studies. Part VI. The effective interference values of non-bonded atoms in solution. Part I. Some preliminary observations, 1542.

Forbes, W. F. and **Ralph, A. S.** Light absorption studies. Part V. The relation of mesomeric effects and ultraviolet light absorption spectra, 1447.

Ford, R. W. and **Frost, G. B.** The low pressure dehydration of magnesium sulphate heptahydrate and cobaltous chloride hexahydrate, 591.

Fowler, I. L. See Grummitt, W. E., 206.

Fowler, R. B. See Craig, D., 1601; Robinson, J. R., 1596.

Frank, A. W. and **Marion, L.** The biogenesis of alkaloids. XVI. Hordenine metabolism in barley, 1641.

Freeman, G. R. See Evans, H. G. V., 1271.

Frost, G. B. See Ford, R. W., 591; Jamieson, J. W. S., 583.

Gagnon, P. E., Boivin, J. L., and **Haggart, C.** A study of the reactions of ammonium sulphamate with amides and ureas, 1662.

Gagnon, P. E., Boivin, J. L., and **Laflamme, Y.** Syntheses and absorption spectra of 1-chlorophenyl-3-phenyl-4-alkyl-5-pyrazolones and pyrazolones-4-C^{14}, 530.

Garmaise, D. L. See McKay, A. F., 1567; Skulski, M., 815.

Garmaise, D. L., Winthrop, S. O., Grant, G. A., and **McKay, A. F.** Amino acids. III. Cyclic guanidino acids and their derivatives, 743.

Gartaganis, P. A. See Huhti, A-L., 785.

Gartaganis, P. A. and **Winkler, C. A.** The reactions of active nitrogen with methane and ethane, 1457.

Gaudry, R. See Talbot, G., 911, 1440; Winthrop, S. O., 1557.

Gaudry, R., Berlinguet, L., Langis, A., and **Paris, G.** Études sur la synthèse de l'hydroxyproline à partir de dérivés de l'acide 2-amino-4-pentènoïque, 502.

Gesser, H. and **Steacie, E. W. R.** The photolysis of ketene in the presence of hydrogen, 113.

Giesinger, A. See Charlesworth, E. H., 376.

Giguère, P. A. and **Falk, M.** Infrared spectrum of solid sulphur dioxide, 1833.

Giguère, P. A. and **Harvey, K. B.** On the infrared absorption of water and heavy water in condensed states, 798.

Giguère, P. A. and **Olmos, A. W.** Sur le spectre ultraviolet de l'acide peracétique et l'hydrolyse des peracétates, 689.

Gilson, K. See Rosenthal, A., 679.

Goble, A., Golden, J., and **Maddock, A. G.** The solvent extraction of protactinium, 284.

Golden, J. See Goble, A., 284.

Good, N. E. The synthesis of indole-3-acetyl-D,L-aspartic acid and related compounds, 1356.

Gorin, P. A. J. See Charlson, A. J., 1811.

Gorin, P. A. J. and **Perlin, A. S.** The preparation of D-*arabo*penturonic acid and D-*threo*- and D-*erythro*-tetruronic acids, 693.
A mannan produced by *Saccharomyces rouxii*, 1796.

Goton, R. and Whalley, E. Thermodynamic properties of benzoic acid, 1506.

Goyer, G. G. L'oxydation stoïchiométrique de l'oxyde d'azote par l'ozone établie par photométrie du bioxyde d'azote, 1730.

Graham, W. D., Patry, O., and **Jackman, E. H.** Influence of methanol on viscosity and light scattering properties of dextran solutions, 445.

Grant, G. A. See Garmaise, D. L., 743; Katz, M., 1719; McIvor, R. A., 1611, 1819; Winthrop, S. O., 1557.

Grant, G. A., von Seemann, C., and **Winthrop, S. O.** Basic esters of substituted pyrimidine-4-carboxylic acids, 1444.

Grant, R. F., Hedgecock, N., and **Dunell, B. A.** Nuclear magnetic resonance study of phase transitions in anhydrous sodium stearate, 1514.

Greenhalgh, R. and **Marion, L.** The papilionaceous alkaloids. XXII. Pusilline; its identity with β-isosparteine, 456.

Griffiths, J. E. See Campbell, A. N., 1647.

Grummitt, W. E. See Brown, R. M., 220; Cruikshank, A. J., 214.

Grummitt, W. E., Brown, R. M., Cruikshank, A. J., and **Fowler, I. L.** Recent developments in low background Geiger–Müller counters, 206.

Gupta, M. P. and **Barnes, W. H.** Unit cell, space group, and indexed X-ray diffraction powder data for potassium hydrogen malonate, $KHC_3H_2O_4$, 563.

Haggart, C. See Gagnon, P. E., 1662.

Hahn, J. W. V. See Semeluk, G. P., 609.

Halasz, A. See McKay, A. F., 1567.

Hall, G. R. and **Walter, A. J.** The mass spectrometry of the actinide elements, 246.

Halpern, J. See Korinek, G. J., 1372; Peters, E., 554.

Halpern, J. and **Smith, J. G.** Kinetics of the oxidation of uranium(IV) by molecular oxygen in aqueous perchloric acid solution, 1419.

Hansen, D. J. and **Wetmore, F. E. W.** Hydrogen overpotential on aluminum, 659.

Haraldsen, H. See Knop, O., 1142.

Harding, T. T. A low-temperature apparatus for single-crystal X-ray goniometers, 371.

Harris, W. E. See Betts, R. H., 65.

Harvey, K. B. See Giguère, P. A., 798.

Hayward, L. D. See Swan, E. P., 856.

Heacock, R. A. and **Marion, L.** The infrared spectra of secondary amines and their salts, 1782.

Hedgecock, N. See Grant, R. F., 1514.

Henderson, I. H. S. See McDowell, C. A., 345; Tingley, I. I., 14.

Herczog, A. and **Pidgeon, L. M.** Measurement of pressures in the titanium iodine system using the effusion method, 1687.

Heyding, R. D. See Huber, M. E., 1288.

Hollbach, N. and **Yaffe, L.** Separation of high specific activity Na^{22} from irradiated aluminum, 1508.

Honig, J. M. and **Reyerson, L. H.** The application of interpolation theory to data on the adsorption of nitrogen, oxygen, and argon on rutile, 1101.

Hooley, J. G. See Lazo, R. M., 1574.

Hopkins, C. Y. See Chisholm, M. J., 549.

Huber, M. and **Flood, E. A.** A note on the temperature dependence of the electrical resistance of salt solutions adsorbed in porous glass, 1497.

Huber, M. E., Flood, E. A., and **Heyding, R. D.** The micropore flow of H_2O and D_2O through activated carbon rods, 1288.

Hubley, C. E. See McIvor, R. A., 1611.

Huhti, A-L. and **Gartaganis, P. A.** The composition of the strong phosphoric acids, 785.

Hyne, J. B. and **Robertson, R. E.** Reactions of arylsulphonic esters. IV. An interpretation of solvolytic activation energies, 863.
Reactions of arylsulphonic esters. V. An interpretation of activation energies of solvolysis of methyl benzenesulphonate in mixed hydroxylic solvents, 931.

Ikuta, M., McAdie, H. G., and **Smith, W. MacF.** The effect of electrolytes on the rate of chloride loss from chloropentammine chromium (III) ion in aqueous solution, 1361.

Ingold, K. U. The influence of alkali on the oxidation of tetralin, 600.

Ito, K. and **Bernstein, H. J.** The vibrational spectra of the formate, acetate, and oxalate ions, 170.

Jackman, E. H. See Graham, W. D., 445.

Jamieson, J. W. S. and **Frost, G. B.** The heats of crystallization of vacuum dehydrated magnesium sulphate heptahydrate and cobaltous chloride hexahydrate, 583.

Jenkinson, W. M. See McKenzie, D. E., 1176.

Jones, J. K. N. A synthesis of 5-*O*-methyl D-glucose and of 2-*O*-methyl D-glyceronamide, 310.
4,6-*O*-*Iso*propylidene-methyl-α-D-glucoside, 840.
See also Erskine, A. J., 821.

Jones, J. K. N. and **Kelly, R. B.** The syntheses of sugars from smaller fragments. Part X. Synthesis of L-*gluco*heptulose, 95.

Jones, J. K. N. and **Merler, E.** The hemicellulose of the fossilized wood of *Cedrus penhallowii*, 840.

Jones, M. H. The polymerization of styrene in the presence of α- and β-bromostyrene, 108.
Graft copolymers of styrene and methyl methacrylate. Part I: Synthesis, 948.
Graft copolymers of styrene and methyl methacrylate. Part II: Viscosity behavior, 1027.

Jones, R. N. See Fairbairn, D., 182; Nolin, B., 1382, 1392; Sandorfy, C., 888.

Jones, R. N. and **Keir, D. S.** A low temperature cell for use with the Cary ultraviolet spectrophotometer, 1017.

Kantro, D. L. See Brunauer, S., 729, 1483.

Kartzmark, E. M. See Campbell, A. N., 672, 1405, 1428.

Kasman, S. and **Taurins, A.** Thiazoles. II. Preparation of alkyl-2-nitraminothiazoles, 1261.

Katz, M., Riberdy, R., and **Grant, G. A.** The oxidation of carbon monoxide by solid silver permanganate reagents. VI. Reaction kinetics and adsorption of water vapor, 1719.

Kebarle, P. See Bryce, W. A., 1249.

Keir, D. S. See Jones, R. N., 1017.

Kelly, R. B. See Jones, J. K. N., 95.

Knop, O. and **Haraldsen, H.** A note on the system wolfram–tellurium, 1142.

Korinek, G. J. and **Halpern, J.** Effects of complexing on the homogeneous reduction of mercuric salts in aqueous solution by molecular hydrogen, 1372.

Kulka, M. Hydrolysis and hydrazinolysis of esters of N,N-dimethyldithiocarbamic acid. A method for the preparation of mercaptans, 1093.

Laflamme, Y. See Gagnon, P. E., 530.

Laidler, K. J. A system of molecular thermochemistry for organic gases and liquids, 626.
The entropies of ions in aqueous solution. I. Dependence on charge and radius, 1107.
See also Couture, A. M., 1209; Ouellet, L., 146; Papee, H. M., 1677.

Langis, A. See Gaudry, R., 502.

Lansdown, A. R. See Perlin, A. S., 451.

Laughton, P. M. and **Robertson, R. E.** Solvolysis in deuterium and hydrogen oxide, 1714.

Lawton, B. E. See McDermot, H. L., 769.

Lazo, R. M. and **Hooley, J. G.** Radiochemical studies of graphite ferric chloride, 1574.

Leblanc, M. E., Morse, A. T., and **Leitch, L. C.** Organic deuterium compounds. XV. Synthesis of some deuterated alkanes, 354.

Lederer, F. See Rosenthal, A., 679.

Leitch, L. C. See Bannard, R. A. B., 1464; Leblanc, M. E., 354; Renaud, R., 98, 179, 181.

Lemieux, R. U., Bishop, C. T., and **Pelletier, G. E.** Preparative partition chromatography of carbohydrates on Celite columns, 1365.

Lemieux, R. U. and **Brice, C.** The relative reactivities of 1,2-*trans*-sugar acetates, 1006.

Lemieux, R. U. and **Cipera, J. D. T.** The preparation and properties of α-D-glucopyranose 1,2-(ethyl orthoacetate) triacetate, 906.

LeRoy, D. J. See Sefton, V. B., 41.

Lister, M. W. Decomposition of sodium hypochlorite: The uncatalyzed reaction, 465.
Decomposition of sodium hypochlorite: The catalyzed reaction, 479.
The reaction between cyanate and hypochlorite, 489.

Lossing, F. P. See McDowell, C. A., 345.

Lossing, F. P., Marsden, D. G. H., and **Farmer, J. B.** Free radicals by mass spectrometry. XI. The mercury photosensitized decomposition of C_2–C_4 olefins, 701.

Lounsbury, M. The natural abundances of the uranium isotopes, 259.
See also Butler, J. P., 253.

Lupien, Y. See Cook, D., 957, 964.

McAdie, H. G. See Ikuta, M., 1361.

McCallum, J. R. The potentiometric method for the determination of aluminum on a semimicro scale, 915.
Analysis for small amounts of calcium, magnesium, barium, and sulphate using phthalein purple, 921.

McCallum, K. J. See Edwards, W. J., 189.

McCarthy, G. D. See McIvor, R. A., 1819.

McDermot, H. L. The adsorption of nitrogen by brominated charcoal, 1693.

McDermot, H. L. and **Arnell, J. C.** The adsorption of nitrogen by brominated graphite and carbon black, 1114.

McDermot, H. L. and **Lawton, B. E.** The adsorption of nitrogen by carbon black and graphite, 769.

MacDonald, S. F. and **Michl, K. H.** The synthesis of phyllopyrrole-dicarboxylic acid, 1671.
The synthesis of the uroporphyrins II and IV, 1768.

McDowell, C. A., Lossing, F. P., Henderson, I. H. S., and **Farmer, J. B.** Free radicals by mass spectrometry. X. The ionization potentials of methyl substituted allyl radicals, 345.

McIvor, R. A., Grant, G. A., and **Hubley, C. E.** Infrared studies of sulphur-containing organic derivatives of phosphorus pyroacids, 1611.

McIvor, R. A., McCarthy, G. D., and **Grant, G. A.** Preparation and toxicity of some alkyl thiopyrophosphates, 1819.

McKay, A. F. See Garmaise, D. L., 743; Skulski, M., 815.

McKay, A. F., Garmaise, D. L., and **Halasz, A.** 1-(β-dialkylaminoethyl)-2-imidazolidinethiones, 1567.

McKenzie, D. E. The volatilization of plutonium from neutron-irradiated uranium, 515.
The distribution of plutonium in the systems uranium–silver and uranium–silver–gold, 749.

McKenzie, D. E., Jenkinson, W. M., and **Denovan, A. S.** The limiting heat of solution of plutonium in some rare earth metals, 1176.

MacLean, D. B. See Barclay, L. R. C., 1519; Perry, G. S., 1189.

McMullen, C. C., Pate, B. D., Tomlinson, R. H., and **Yaffe, L.** The half-life of Ni^{63}, 1742.

Maddock, A. G. See Goble, A., 284.

Maddock, A. G. and **de Maine, M. M.** Recombination of recoil fragments in neutron-irradiated potassium chromate, 275.
A search for the chemical effects of internal conversion following radiative neutron capture, 441.

de Maine, M. M. See Maddock, A. G., 275, 441.

Manske, R. H. F. The alkaloids of fumariaceous plants. LI. *Corydalis solida* (L.) Swartz, 1.

Marinier, B. See Favre, H., 1329.

Marion, L. See Edwards, O. E., 1315; Frank, A. W., 1641; Greenhalgh, R., 456; Heacock, R. A., 1782; Morgan, A., 1704; Przybylska, M., 185.

Marsden, D. G. H. See Lossing, F. P., 701.

Martin, G. R. See Purkayastha, B. C., 293.

Martin, W. G., Cook, W. H., and **Winkler, C. A.** The determination of partial specific volumes by differential sedimentation, 809.

Mason, S. G. See Robertson, R. F., 716.

Maurukas, J. See Baer, E., 1182.

Merler, E. See Briggs, T. I., 851; Jones, J. K. N., 840.

Merritt, J. S. See Butler, J. P., 253.

Michl, K. H. See MacDonald, S. F., 1671, 1768.

Miller, D. M. A method of recording a-c. polarograms on a conventional d-c. polarograph, 942.
The polarography of the methyl derivatives of maleic hydrazide and explanation of the maleic hydrazide waves, 1760.

Miller, D. M. and **White, R. W.** The structure of maleic hydrazide as inferred from the ultraviolet spectra of its methyl derivatives, 1510.

Millington, J. E. See Pattison, F. L. M., 757.

Millington, J. E. and **Pattison, F. L. M.** Toxic fluorine compounds, XII. Esters of ω-fluoroalcohols, 1532.

Morgan, A. and **Marion, L.** The biogenesis of alkaloids. XVII. Further study of the role of ornithine in the biogenesis of stachydrine, 1704.

Morley, H. B. and **Wetmore, F. E. W.** Determination of parameters in overpotential studies, 359.

Morrison, J. L. See Semeluk, G. P., 609.

Morse, A. T. See Leblanc, M. E., 354.

Mossman, C. E. and **Rideal, Sir E.** On the measurement of charge on individual fibers, 88.

Mueller, W. A. See Forbes, W. F., 1340, 1347, 1542.

Nolin, B. and **Jones, R. N.** The infrared absorption spectra of deuterated esters. I. Methyl acetate, 1382.
The infrared absorption spectra of deuterated esters. II. Ethyl acetate, 1392.

Olmos, A. W. See Giguère, P. A., 689.

O'Neill, A. N. and **Stewart, D. K. R.** On the structure of agar from *Gelidium cartilaginium*, 1700.

Ouellet, L. and Laidler, K. J. Theory of the transient phase in kinetics, with special reference to enzyme systems. II. The case of two enzyme–substrate complexes, 146.

Papee, H. M., Canady, W. J., and **Laidler, K. J.** The heat of neutralization of strong acids and bases in highly dilute aqueous solutions, 1677.

Paris, G. See Gaudry, R., 502.

Pate, B. D. See McMullen, C. C., 1742.

Pate, B. D. and **Yaffe, L.** Disintegration-rate determination by 4π-counting. Part IV. Self-absorption correction: General method and application to Ni^{63} β-radiation, 265.

Patry, C. See Graham, W. D., 445.

Pattison, F. L. M. See Millington, J. E., 1532.

Pattison, F. L. M. and **Brown, G. M.** Organic nitrates as synthetic intermediates. Preparations of nitrates and some representative reactions, 879.

Pattison, F. L. M. and **Millington, J. E.** The preparation and some cleavage reactions of alkyl and substituted alkyl methanesulphonates. The synthesis of fluorides, iodides, and thiocyanates, 757.

Pelletier, G. E. See Lemieux, R. U., 1365.

Pepper, J. M. See Crawford, L. W., 1562; Duff, J. G., 842.

Perlin, A. S. See Charlson, A. J., 1200, 1804, 1811; Gorin, P. A. J., 693, 1796.

Perlin, A. S. and **Brice, C.** Preparation of D- and L-glyceraldehyde from ketohexoses, 85.
Reaction of aldoses and ketoses with lead tetraacetate, 541.

Perlin, A. S. and **Lansdown, A. R.** Lead tetraacetate oxidation of oligosaccharides, 451.

Perry, G. S. and **MacLean, D. B.** *Lycopodium* alkaloids. III. Functional groups of some minor alkaloids of *L. annotinum*, 1189.

Peters, E. and **Halpern, J.** Effect of complexing on the homogeneous catalytic activation of hydrogen by cupric salts, 554.

Petrucci, R. H. and **Sorum, C. H.** The formation of supercooled liquid solutions in simple-eutectic type organic systems by the sublimation of solid mixtures, 649.

Petruska, J. A. See Wiles, D. M., 227.

Phillips, G. See Cornish, F. W., 1471.

Pidgeon, L. M. See Herczog, A., 1687.

Przybylska, M. and **Marion, L.** The crystal structure of des-(oxymethylene)-lycoctonine hydriodide monohydrate, 185.

Purkayastha, B. C. and **Martin, G. R.** The yields of ^{129}I in natural and in neutron-induced fission of uranium, 293.

Purves, C. B. See Sanyal, A. K., 426; Vincent, D. L., 1302; Yan, M. M., 1582, 1747.

Ralph, A. S. See Forbes, W. F., 1447.

Reichmann, M. E. and **Colvin, J. R.** The number of polypeptide chains in bovine plasma albumin, 160.
The number of subunits in the molecule of horse hemoglobin, 411.

Renaud, R. and **Leitch, L. C.** Organic deuterium compounds. XIV. Preparation of deuterated methyl benzenes, 98.
Synthesis of methyl-d_3 formate, 179.
Synthesis of deuterated dimethyl carbonate, 181.

Reyerson, L. H. See Honig, J. M., 1101.

Riberdy, R. See Katz, M.,1719.

Richardson, F. R. See Diaper, D. G. M., 1835.

Richer, J-C. See Favre, H., 1329.

Rideal, Sir E. See Mossman, C. E., 88.

Robertson, R. E. See Hyne, J. B., 863, 931; Laughton, P. M., 1714.

Robertson, R. F., Winkler, C. A., and **Mason, S. G.** Radioiodine exchange between iodostearic acid monolayers and substrate iodide, 716.

Robinson, J. R. See Craig, D., 1601.

Robinson, J. R., Craig, D., and **Fowler, R. B.** The reaction of tetramethylthiuramdisulphide with acetone. I. Reaction products, 1596.

Rosenthal, A., Lederer, F., and **Gilson, K.** Influence of the number of carbon atoms of the alkyl group on polymerization and properties of para-alkylphenol–formaldehyde polymers, 679.

Ross, L. See Campbell, A. N., 151, 566.

Roy, L. P. and **Yaffe, L.** Pile neutron capture cross section of 33 hr. Ce^{143}, 238.
Thermal neutron capture cross section of Ce^{142}, 1023.

Rubin, L. J. See Bharucha, K. R., 982.

von Rudloff, E. Periodate–permanganate oxidations. V. Oxidation of lipids in media containing organic solvents, 1413.

Runnalls, O. J. C. The crystal structures of some intermetallic compounds of plutonium, 133.

Rutherford, G. See Campbell, A. N., 151.

Ryan, D. E. Palladium and substituted quinolines, 839.
Dimethylphenylbenzylammonium chloride: A reagent for the gravimetric determination of platinum, 1683.

Sandorfy, C. and **Jones, R. N.** The ultraviolet absorption spectra of methyl-1,2-benzanthracenes, 888.

Sandri, R. On flame propagation in explosive mixtures of gases. I. General theory, 313.
On flame propagation in explosive mixtures of gases. II. On the decomposition flame of ozone, 324.
On flame propagation in explosive mixtures of gases. III. Flame propagation in mixtures of methane and nitrogen air, helium air, and argon air, 331.

Sanyal, A. K. and **Purves, C. B.** Some xanthate methyl esters of glucose, 426.

Sawatzky, H. See Brown, W. H., 1147.

Schaefer, T. P. See Campbell, A. N., 151.

Schiff, H. I. See Toby, S., 1061.

Schmorak, J. See Bishop, C. T., 845.

Schneider, W. G. See Cook, D., 957, 964.

Schreiber, H. P. See Benson, G. C., 1553; van Zeggeren, F., 1501.

von Seemann, C. See Grant, G. A., 1444.

Sefton, V. B. and **Le Roy, D. J.** The polymerization of ethylene sensitized by ethyl iodide, 41.

Semeluk, G. P., Hahn, J. W. V., and **Morrison, J. L.** Myristic acid monolayer at low surface pressures, 609.

Sheppard, W. A. See Stasiuk, F., 123.

Shyluk, W. P. and **Timell, T. E.** A new method for preparing hydroxyethyl ethers of glucose, 571.
Synthesis of four carboxymethyl ethers of glucose, 575.

Skulski, M., Garmaise, D. L., and **McKay, A. F.** The structures and chemistry of the products from the reaction of amino alcohols with carbon disulphide, 815.

Smeltzer, W. W., Tollefson, E. L., and **Cambron, A.** Adsorption of oxygen by a silver catalyst, 1046.

Smith, D. B., Wood, G. C., and **Charlwood, P. A.** Application of the Archibald ultracentrifugal procedure to lysozyme and apurinic acid: Evaluation using a mechanical integrator, 364.

Smith, J. G. See Halpern, J., 1419.

Smith, W. MacF. See Ikuta, M., 1361.

Sorum, C. H. See Petrucci, R. H., 649.

Stancer, H. C. See Baer, E., 436.

Stasiuk, F., Sheppard, W. A., and **Bourns, A. N.** An oxygen-18 study of acetal formation and hydrolysis, 123.

Steacie, E. W. R. See Ayscough, P. B., 103; Gesser, H., 113.

Stevenson, M. D. See Betts, R. H., 65.

Stewart, D. K. R. See Edwards, O. E., 1315; O'Neill, A. N., 1700.

Stewart, D. W. See Allen, C. F. H., 926.

Sukava, A. J. and **Winkler, C. A.** Depolarization by mercaptoacetic acid during electrodeposition of copper, 128.

Swan, E. P. and **Hayward, L. D.** Polymer-analogous denitration of polysaccharide nitrates: A study of some reductive methods with model compounds and cellulose nitrate, 856.

Sybulski, S. See Winthrop, S. O., 1557.

Symposium on Nuclear Chemistry and Radiochemistry, 189–309.

Taber, W. A. See Vining, L. C., 1163.

Talbot, G., Gaudry, R., and **Berlinguet, L.** A new synthesis of DL-γ-hydroxy-ornithine, 911.
A convenient synthesis of DL-glutamic acid from β-propiolactone, 1440.

Taurins, A. See Kasman, S., 1261.

Thode, H. G. See Blades, A. T., 233; Fleming, W. H., 193, 408.

Thomas, A. See Cornish, F. W., 1471.

Timell, T. E. See Shyluk, W. P., 571, 575.

Tingley, I. I., Henderson, I. H. S., and **Coffin, C. C.** The metal–solution silver ion exchange, 14.

Toby, S. and **Schiff, H. I.** The reaction of deuterium atoms with ethylene, 1061.

Tollefson, E. L. See Smeltzer, W. W., 1046.

Tomlinson, R. H. See McMullen, C. C., 1742; Wiles, D. M., 227.

VanAllan, J. A. See Allen, C. F. H., 926.

Vincent, D. L. and **Purves, C. B.** The chemical stability of the *S*-methyl xanthates of some simple alcohols, 1302.

Vining, L. C. and **Taber, W. A.** Preparation and properties of crystalline candidin, 1163.

Walker, I. G. and **Butler, G. C.** The sugar component of deoxyribonucleosides, 1168.

Walter, A. J. See Hall, G. R., 246.

Warkentin, J. See Dunn, G. E., 75.

Weise, C. H. See Brunauer, S., 729, 1483.

Westman, A. E. R. See Crowther, J., 969.

Westman, A. E. R. and **DeLury, G. B.** The differential equations of consecutive reactions, 1134.

Wetmore, F. E. W. See Hansen, D. J., 659; Morley, H. B., 359.

Whalley, B. J. P., Evans, H. G. V., and **Winkler, C. A.** The oxidation of hydrazobenzene by ammonium persulphate in acetonitrile–water solution, 1154.

Whalley, E. See Goton, R., 1506.

White, R. W. See Miller, D. M., 1510.

Wiles, D. M., Petruska, J. A., and **Tomlinson, R. H.** Some cumulative yields of isotopes formed in the thermal neutron fission of Pu^{239}, 227.

Wilmshurst, J. K. See Evans, J. C., 1139.

Winkler, C. A. See Armstrong, D. A., 885; Dunford, B., 1074; Evans, H. G. V., 1217, 1271; Gartaganis, P. A., 1457; Martin, W. G., 809; Robertson, R. F., 716; Sukava, A. J., 128; Whalley, B. J. P., 1154.

Winthrop, S. O. See Garmaise, D. L., 743; Grant, G. A., 1444.

Winthrop, S. O., Sybulski, S., Gaudry, R., and **Grant, G. A.** Some basic derivatives of 6-chloroquinazoline and phthalazine, 1557.

Wood, G. C. See Smith, D. B., 364.

Yaffe, L. Foreword, 189.
See also Hollbach, N., 1508; McMullen, C. C., 1742; Pate, B. D., 265; Roy, L. P., 238, 1023.

Yan, M. M. and **Purves, C. B.** Attempted delignifications with sodium bicarbonate–carbon dioxide, and with anhydrous liquid ammonia, under pressure, 1582.
Extraction of a lignin fraction from maple wood by liquid ammonia, 1747.

Yankwich, P. E. Chemical effects of the nuclear transformation $N^{14}(n, p)C^{14}$, 301.

van Zeggeren, F. The relation between activation energy of the viscosity and heat of vaporization for molten salts, 1512.
See also Benson, G. C., 1553.

van Zeggeren, F., Schreiber, H. P., and **Benson, G. C.** The purity of small sodium chloride particles prepared by electrostatic precipitation, 1501.

Ziegler, P. The elucidation of the structure of hyocholic acid, 523.
The structure of hyocholic acid, 1528.
See also Bharucha, K. R., 982.

CORRECTIONS

Volume 28 (Section B)

Page 686. In line 2, "0.516 mole" should read "0.0516 mole".
Page 687. In line 17, "0.037 mole" should read "0.375 mole".
In line 21, "(74–76%)" should read "(10.5–12.1%)".

Volume 33

Page 662. In line 6, "we get 0.08574 for Δv" should read "we get 0.09399 for Δv".
In line 10, "0.025° per atm." should read "0.028° per atm.".

Page 1830. Line 4 up in Table II should read:
"Iodobenzoic *233* *7000* 217 26,000 252 17,000".

Volume 34

Page 86. Lines 6 to 11 under "Experimental" should read:
"D-*Glyceraldehyde*
D-Fructose (5.0 gm., 0.028 mole) was dissolved in 10 ml. of water* and the solution was diluted with 500 ml. of glacial acetic acid. Lead tetraacetate (26.1 gm. dry weight, 0.059 mole) was added to the solution with vigorous stirring and, 20 min. after the oxidant had dissolved, the lead was precipitated by adding 50 ml. of a 10% solution of oxalic acid in acetic acid. Stirring was . . . . . ".

Page 185. In line 7 up, "6%" should read "68%".

Page 257. In paragraph 2 (below Table II), the first sentence should read:
"A weighted average gives a value of $(3.73 \pm 0.05) \times 10^5$ yr. for the α half-life of Pu^{242}".

Page 325. In equations [1], [2], and [3], n should read n^2.

Page 326. In the line above equation [9], U should read $U_{+(1)}$.

Page 725. Equation [8] should read:

$$"c(t) = c(0).e^{\mu^2 Dt}.\mathrm{erfc}(\mu\sqrt{Dt})"$$

[Authors' note] "For the case cited, this expression yields a mean $k = 1600 \times 10^{-4}$ min.$^{-1}$ over the interval $t = 0$ to 10 min. so that the argument presented is not substantially affected.
A rigorous treatment of the contribution to the counting rate of the material diffusing in the substrate will be presented in a subsequent paper".

Page 743. In compound III, $NH_2(CH_2)_nN\begin{matrix}R''\\ \diagdown\\ \diagup\\ R'\end{matrix}$ should read: $NH_2(CH_2)_nN\begin{matrix}R'\\ \diagdown\\ \diagup\\ R'\end{matrix}$.